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Among the Flowers; or, Gardening for Ladies.

BY ANNE G. HALE.

VI.

(CONCLUDED.)

Everlasting] Flowers and Their Management.

Helichrysum (called by some *Graphalum apiculatum*) is the golden eternal flower, which, with the globe amaranth and white satiny seed-pods of the honesty—*Lunaria biennis*—formed the whole list of flowers for winter decorations when our grandmothers were girls. Now, besides the old *Helichrysum bracteatum*, whose sunny face is as radiant as ever, we have over a dozen varieties, in all shades of yellow, and in yellow and brown, yellow tipped with crimson, crimson, rose, white, white tipped with rose, and white with yellow centre; single, semi-double and double—some very large and full—like great balls of gold. Of these, *H. compositum monstrosum* is the most elegant variety, with its large and full blossoms, some plants bearing pure white, others rose, and, others still, red or yellow. These make a fine show in the garden. They need a rich soil, and, like the gomphrena do best started in the house or in a hot-bed. Seeds produced by the florets of the ray (the outer row of petals), as in all composite flowers, are more likely to yield double flowers. This variety grows to the height of two feet.

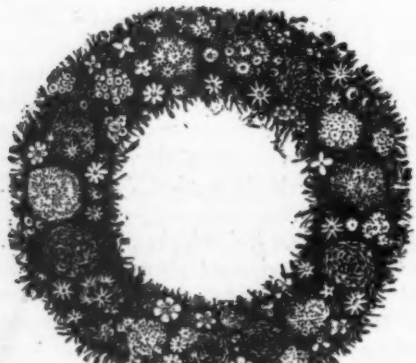
The dwarf helichrysums, from half a foot to eighteen inches high, are, in general, less hardy and of delicate colors. *H. nanum atrosanguineum* is, however, an exception, with its brilliant crimson flowers. *H. minimum* and *H. brachyrrhincum* are exceedingly bright, but of tender habits. *H. chrysocephalum strictum* is a splendid plant, with an abundance of gorgeous orange-yellow flowers, rather small, but very desirable. This variety stands three feet high at maturity. The Helichrysums need the same treating as gomphrenas. Their buds are particularly beautiful if dried in several stages of growth. Both these and gomphrena buds are very effective, in con-

nection with their blossoms, for wreaths or for baskets, as may be seen in these little Swiss flower baskets, where several species of dried everlastings are prettily grouped with green moss.

This is the wood-moss, that grows on the bark of old trees, near their roots, and on rocks in moist situations, mostly in the shade of trees. Get this in May or June, wash it from all impurities, and spread it to dry in the dark; then keep it from light and air till used; but, even with the greatest care, it will fade in the course of a few months.

Its color can frequently be restored when faded, and also that of the faded moss that is found in autumn or early spring, by subjecting it to a hot bath of weak "crystal blue," such as is used for laundry purposes. But to brighten any amount of moss, it should be thoroughly cleansed from dust, etc., then partially bleached, by lying an hour in a solution of chloride of lime (an ounce to a pailful of water), hot, rinsed immediately in clean, cold water, and passed through a hot bath of crystal blue, to which sufficient (a few drops) muriate of iron has been added to make it a good green. French moss already dyed can be obtained of the florists, but our own, thus treated, is excellent.

Pretty pictures—bas-reliefs—are made by cutting these small baskets in halves, and gumming each half to card-board, then filling them with moss and everlasting flowers, and gumming those also to the card-board. Thus two baskets are represented as if resting against a white back-ground. The body of such baskets may be filled with soft paper or cotton, the moss and everlastings resting upon and glued or gummed to the rim, and also at the back to the card-board. Glassed and framed, these pictures are cheerful ornaments for the mantel or the walls of any room.



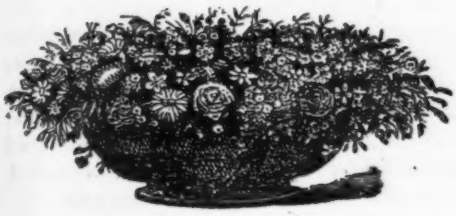
Helipterum, the "sun's wing" of our flower-border, is a favorite with many, because it grows with as little care as a daisy. Low in growth—less than a foot—but thickly studded with bright yellow or white blossoms, that hold their color well. *H. Sanfordii* has clusters of golden yellow; *H. anthemoides* has white, and a recent variety, *H. corymbiflorum*, is said to produce particularly fine white star-like flowers.

The helipterums are used in company with gomphrenas, helichrysums and other eternals in the annexed illustration. The combination of so many species, when their various colors are properly contrasted, makes a very

handsome display. A wreath of this sort, made like that on the previous page, is suitable for a grave, or for a parlor window at Christmas.

If small and delicate sprigs of lycopodium be used for verdure, or if moss be substituted for it, and the wreath be made in the manner directed for covering the anchor, it serves admirably as a frame for a picture—a photograph likeness, for instance.

Rhodanthe, though rather a tender plant, is considered by most cultivators the handsomest of all everlasting flowers. Its half-blown buds are bell-shaped, and its colors, varying from purple and violet to white, sometimes with deep purple centres, at others with a golden disk, give it a charming appearance. The seed should be started within doors, and the young plants set in rich, mellow soil. *Rhodanthe Manglesii*, an Australian variety, has many admirers; is often kept as a parlor plant through the winter, growing well with the gomphrenas. *R. atrosanguinea* has handsome foliage, and blossoms with claret centres; in some flowers dark violet and maroon, the rays—the outer scales—being of a brilliant crimson. *R. maculata* is a a hardy variety, with light purple, and *R. maculata alba* has elegant silvery white ray-scales, with yellow disk—very desirable flowers to be used in the making up of winter flower-baskets, the beautiful colors and graceful forms of their buds and half open flowers being a charming addition to any collection, as we see in this handsome Christmas basket—a very appropriate gift for an invalid's table, or a fine ornament for a corner stand in the parlor. These baskets, lined with silver paper or tin-foil, and then filled with sawdust or dry sand, hold the stems of eternal flowers, mosses and dried grass-flowers in a steady position, just as they are arranged, for any length of time. If in a situation exposed to dust or wind, they should be kept under glass.

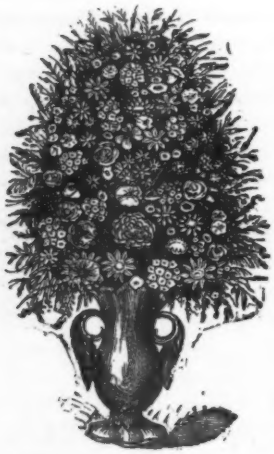


Polycolymna Stuartii is a trailing everlasting, quite hardy for garden growth; is used with others of the same class on account of its showy white flowers, in these winter baskets. Some baskets are mounted on stands. Our illustration shows the polycolymna, its trailing branches drooping from the brim. Any neat basket, such as ladies use for sewing materials, looks pretty, and is a very convenient receptacle for winter flowers and grasses, with lycopodium or moss to bring the various forms and hues into good position; the color of brown baskets displays the white and yellow tinted blossoms to better advantage than the ordinary neutral tint of wicker-work.

Waitzia aurea and *Waitzia grandiflora*—new varieties of this class of flowers—though tender, requiring a start in the hot-bed or in a window box, are elegant plants for the garden; and, if the blossoms are cut from the parent stock early, are of a clear, golden yellow. *W. grandiflora* produces an abundance of very handsome clusters of flowers, that must be gathered before they are fully expanded, and dried as directed for graphaliums.

Xeranthemum annuum, the purple everlasting, is always wanted for winter wreaths or bouquets, and seems never out of place in a funeral garland, for its exquisite purple tints harmonize well either with white or gold color. All the varieties are easily reared every summer, from seed that germinates quickly in a warm, light soil. Though growing only to the height of ten or twelve inches, they yield a profusion of flowers, large and double. *X. alba*, the double white variety, is very handsome; also *X. cæruleum*, with pale blue blossoms.

From these different species of everlastings and their several varieties, when nicely dried, a most elegant bouquet can be made. Examine carefully this representation, and note what variety of form and figure from bud and blossom, clustered or singly, the comparatively small range of everlasting or eternal flowers supplies. With the simple greenery of lycopodium and wood moss adding their peculiar charms, a more tasteful ornament for the mantel or a corner bracket cannot be devised. To arrange a bouquet like this, presenting only a front view—a flat bouquet, as it is styled—a number of wires or bare twigs, of various lengths, must be provided, to each of which the evergreen and the flowers are bound, as the fancy directs, in small portions of each, beginning at the top with the most slender moss and finest lycopodium. Cover the twigs (if forked and branching, so much the better), for an inch or two with the green; then fasten them together securely at the base, spreading them, to make the group somewhat fan-shape; then proceed with the smaller buds and blossoms for the outer flowers of the bouquet, and the larger and more showy for the centre; tie each securely; and, filling all vacancies with moss, its delicate fronds also edging the outlines of the group, as you weave in and tie the stems, you will at last have the result here portrayed. Fill a vase with sand, and insert the bare ends of the twigs—two inches should be left uncovered—and your bouquet has a firm support. Ornamental grasses are frequently introduced into bouquets of eternal flowers, and the airy grace of their delicate blossoms has a most charming effect; but we must reserve their consideration for another paper.



It has been shown that all these articles of decoration can be made at home, and that all the materials used in their construction can be easily procured, while the flowers, after beautifying the family garden, can be preserved a long time in these

tasteful designs. But there is no danger of this being done to the extent of interfering with the trade; were greater interest awakened in this, as in other horticultural matters, our florists would have occasion to renew yet oftener their orders to England and France for floral designs, as well as for seeds and plants.

Floral Notes.

Stimulant for Flowers.

ONCE a week it is well to use a little stimulant. Rain water, so refreshing to summer flowers, contains considerable ammonia, and can be used freely. A small, two or three ounce bottle of spirits of ammonia may be dissolved in a large pailful of water and this applied to the plants. Another plan is to dissolve an ounce of pulverized carbonate of ammonia in one gallon of water; this is very stimulating. Once in two weeks, guano water may be used (one table spoonful to a pail of water), and the plants will grow more thriftily. Chicken manure dissolved in water is excellent. It is well to keep the soil in the flower pots loose and open. A common hair pin, used daily, will stir the earth sufficiently.

To Restore Frosted House Plants.

An exchange says: "Don't hurry them into a warm room, as you would a frost-bitten chicken. Let them remain where they were frozen, close the window shutters or drop the curtains, so as to make the room quite dark; then sprinkle the plants with cold water, direct from the cistern, and wait the result.

"Do not allow the room to become warmer than forty-seven degrees for twenty-four hours. If a few drops of the spirits of camphor are thrown into the dish before sprinkling, it will be all the better. Plants treated in this way, though frozen so badly that water will freeze in drops on the leaves when sprinkled, yet by keeping the room dark and cold for an entire day, they will come out unharmed."

Roses in South Carolina.

P. Barry, writing to the *Rural New Yorker*, from Aiken, S. C., says: "I thought that St. Augustine bore the palm for roses, but Aiken is not behind. Although the soil is very light, sandy and apparently poor, roses of all kind seem to thrive and bloom remarkably well. 'Fortune's Yellow,' which we rarely see, is superb here in several gardens."

Lists of Flower Seeds.

The following lists were made out this spring by Henderson and Fleming, for the information of members of the Farmers' Club:

First: List of annuals suited to rather poor ground and earth thrown up from cellars:

Adonis autumnalis,
Bartonia aurea,
Candytuft,
Clarkia,
Collinsia,
Gilia tricolor,
Nasturtiums,
Nigella (Love in a Mist),
Lupins,
Prince's Feather,
Morning Glory,
Antirrhinum, or Snapdragon,

Mignonette,
Nemophila,
Nolana lanceolata,
Amaranthus tricolor (Joseph's Coat),
Sweet Alyssum.

Second: Flowers that will grow well on prairie when first opened:

Asters,
Calliopsis,
Callirhoe,
Cape Marigold,
Campanulas,
Cypress Vine,
Delphinium,
Eschscholtzia Californica (California Poppy),
Evening Primrose,
Leptoriphon,
Limnanthes Douglasii,
Linum Grandiflorum,
Musk Plant,
Palafoxia,
Sanvitalia,
Sweet Sultan,
Sweet William.

Third: List for the average village door-yard in the latitude of New York:

Amaranthus,
Cacalia, or Tassel Flower,
Clarkia,
Catchfly,
Chrysanthemum—annual,
Dianthus of sorts,
Ipomeas,
Marvel of Peru,
Pansy,
Petunia,
Phlox Drummondii,
Portulaca,
Saponaria,
Scabiosa, or Morning Bride,
Sweet Peas,
Venus's Looking-Glass,
Virginian Stock,
Viscaria,
Whitlaria,
Zinnia Elegans.

Best New Fuchsias.

"So many new ones are good, it is hard to choose the best. But Madame Deproost is good; it has a bi-colored corolla. Starlight and Marksman are also two very good varieties."—*Gardener's Monthly.*

House Plants.

There are some plants that appear specially adapted to window-culture. Among the finest of these is the geranium It sports almost innumerable varieties, in colors ranging from pure white through pink, cerese, cherry, and crimson, to the most fiery, intense scarlet. There are spotted ones, striped ones; varieties with white eyes, and double kinds. These double kinds are a late acquisition, but remarkably fine. Of several varieties of the double geranium, I have found the Gloire de Nancy (bright soft scarlet) and the Madame Lemoine (beautiful rose-color) to be the best. They stay in bloom a long time, have large and handsome trusses of flowers, and blossom profusely. The Tom Thumb double is worthless. In color and profusion it is fine, but the central blooms fade and wither long before the outer ones open, and give the whole truss an appearance of a ball of scarlet and black rags tied together. Its habit of growth is good, but not so its blossoming. For single varieties, the Herald of Spring is the most perfect flower I have ever had. It is bright crimson with white eyes; has large flowers opening uniformly on the truss, and these flowers are circular in shape—much like a pansy. The Virgo Maria is pure white, and has immense clusters of blossoms. Rose Rendatler is bright pink, spotted with white. For variegated geraniums, the Mrs. Pollock is unsurpassed. It has bright green leaves, banded with golden-yellow and belted with brown. Where the belt streaks up into

the band, it is bright crimson. The Lady Plymouth is the old rose geranium with a white variegation.

Heliotropes are beautiful in growth; in flower, very fragrant, and a profuse bloomer. Almost any kind is good. One cluster of these flowers will scent a whole room in winter, with its spicy, summer-like fragrance.

Carnations are valuable for house flowering. They blossom profusely, and are splendid flowers. Added to their beauty, is their fragrance. La Purite (bright rose), Defiance (scarlet), and Flatbush (white), are three good varieties.

Monthly roses are too well known to need any extolling. Hermosa (pink) and Louis Phillippe (dark crimson) are free bloomers and good growers.

Fuchsias are fine for summer-flowering, but seldom blossom in winter.

Begonias do well in the house, and are valuable for their unique foliage, if they never blossomed.

Bouvardias, especially Hogarth, are nice plants for the window. Their scarlet and pink clusters are produced in great profusion, and are extremely showy.

The Calla, or Egyptian lily, does well in some rooms. Its large leaves give one a great deal of pleasure from their luxuriant, tropical appearance, and when its creamy, white blossoms appear, it is always admired.

Hanging plants ought never to be omitted from any collection. They have a grace peculiarly their own. Any old basket will *do*, but a sort of ox-muzzle, made of wire and lined with moss, is better than the usual make-shifts seen suspended in windows.

The *terra-cotta* baskets or pots, sold for hanging plants, are pretty, but not as good as the moss baskets are. Moneywort, Trandescantia, Glechoma, or Wandering Jew, called in some places "Jill-over-the-Ground," "Cats-foot," or, more properly, ground ivy, English ivy, Maderia vine, petunia, and ice-plant, are good plants for hanging baskets. In watering plants in moss baskets, immerse them, plants, basket, and all, in a pail of water.

Cannas, coleuses, and other plants used for lawn purposes in the new sub-tropical style of gardening, will do quite well in the house. For spring flowering, I always have a lot of hyacinths and tulips. Nothing goes beyond them in showiness, and they are easily grown.—*Western Rural.*

Hints for the Flower Garden.

The Soil.—Flowers need something more than dirt. A dry warm loam, rich, fine, with a large admixture of sand, is the soil for flowers. Thousands of dollars' worth of fine flower seeds are lost every year by being planted in cold, hard, wet or half pulverized soil. The utmost care should be taken in this matter. It is but a small space that you grow the flowers in and that should be the best and the most thoroughly prepared.

Arrangement.—Many persons who have large quantities of flowers fail in arranging them in the flower-bed so as to produce the best effects. In selecting flowers consider for what purpose you wish them. If you want showy masses of flowers select Verbenas, Phlox, Candytuft, Petunias, etc. If a tall, showy group is desired, Zinnias, Balsams, Poppy, Marygolds, Calliopsis, etc., will produce the desired effect. Pansies and Verbenas make beautiful beds without other flowers.—*N. E. Homestead.*

An English paper describes a case of a yellow primrose which, when planted in a rich soil, had the flowers changed to a brilliant purple. It also says that charcoal adds great brilliancy to the colors of dahlias, roses, and petunias; carbonate of soda reddens pink hyacinths, and phosphate of soda changes the colors of many plants.

Tulips do Not Need Manure.

The California Horticulturist quotes the following experience in illustration of the above statement: "Two years since a gentleman residing in this city, imported a parcel of Holland Bulbs, consisting chiefly of Hyacinth, Tulips, and Anemones. He prepared a bed for them in a sunny exposure, and added sufficient of old cow manure, to make it half manure and half soil. In this bed he planted his Hyacinth and Tulips; we called his attention to the fact that Tulips do not require so much manure, and we expressed fear for his ultimate success. We have never seen a finer lot of Hyacinths in bloom in California than his, but the Tulips were a complete failure. This example vindicates an old-established rule, that 'the Tulip will not thrive well in heavily manured soil, and even if it does the flowers will exhibit much inferiority in the various shades of color.' 'The best way to manage Tulips is to procure healthy bulbs, plant them without delay in deep loose soil, neither too sandy nor too clayey, selecting a sunny exposure, more so if possible than for the Hyacinth. They can grow with less moisture, too much of which promotes decay.'"

Fuchsias.

S. O. J., in her admirable articles on gardening for ladies, gives directions for the management of the Fuchsias.

"Fuchsias are among the most beautiful of our 'bedding-out' plants—but they require careful treatment to grow and bloom in perfection. They love a cool, shady, moist situation, and the noonday sun will wither their lovely bells. It is well to take them from the pots and plant in the most sheltered nook of the garden; the morning sun is favorable to them, and its last rays are not injurious. The Fuchsia is a gross feeder, and demands a vast amount of plant tonic—thus treated, their roots will strike deeply into the soil. Watering twice a week with liquid manure water, either of guano or stable manure, will increase their beauty and bloom. Cuttings should be struck at this season for spring blooming—and the large plants can be wintered either in dry sand or in boxes of earth. At the far south they will require no covering—can be allowed to remain in the open border all the year round. At their first introduction into England they were treated as 'stove' plants, but now they wander at their own sweet will over trellis or porch, and are as luxuriant as our trumpet or monthly honeysuckles; the birds build their nests in their boughs, and rustic seats are made from their stout stems! They love moisture, should be watered twice a day in a hot, dry season, at morning and night, *never at noonday*. If planted under trees, the boughs should not be lower than ten feet, as it would impede the free circulation of the air. To make them grow bushy the tapering stems should be pinched off, and two branches will start forth. The different species possess different habits. One that naturally grows in a bushy form, cannot be forced into the shape of an umbrella, while the Speciosa and the Souvenir de Cheswick, etc., cannot be made to grow bushy. Plants will follow their characteristics unless very rigidly pruned and

trained. With those of a bushy form, care must be taken to pinch off the innumerable side shoots which spring from nearly every leaf; these retard the blooming of the plant and weaken its growth. We have a Speciosa, six feet in height, which has bloomed constantly since February, and still puts forth new shoots and blossoms. Among the new varieties of the season are Marksman, a double variety of great beauty, Vainque de Puebla, a double white corolla veined with scarlet; which is rarely beautiful, and Carl Halt, whose crimson corolla is striped like a carnation. Thanks to our unknown friend, we have fine specimens of the three in full bloom. Heliotropes require all the sun and air they can receive. They are natives of the Himalaya Mountains, and grow like rank weeds in a rich, sandy soil. They demand a generous culture, and frequent watering with liquid manure. The richer the soil, the more luxuriant the plant. They can be made to grow ten to twelve feet high."

Cherries, Marketing, Etc.

CHERRIES are one of the most perishable fruits that grow in our country, so much so, that many persons have relinquished the growing of them for marketing purposes. While others, thinking they can succeed with new varieties, have undertaken the growing of them for the purpose of making money by so doing.

One of the greatest difficulties in the way of these persons, is how, or in what way, or what package can they make use of in order to get the fruit to market in good order.

Before speaking on this point, permit me to draw their attention to one very essential point, and that is, to handle it with the greatest of care before placing it in the package for shipping. They should always be picked with the stems on, and in clusters, if the fruit will permit, and never be packed in a damp condition.

If they are much spotted, showing a disposition to rot, sort them carefully, and not ship any of the damaged ones, as they will affect the others.

When they are picked off the stems, the juice runs from the fruit, and dampens it, which also causes it to spoil on the route, particularly if the weather is extremely hot.

In regard to the package to be made use of in shipping. I am not prepared to say which is the *best;* for the *distance* the fruit is to be sent, and the mode of transportation, must be taken in consideration. Where the distance to market is short, and the expense of returning the package is not heavy, they might make use of small oblong baskets, containing from 10 to 15 pounds. By having these baskets twice the length of the width, they can be packed in square skeleton cases, two in a layer, reversing the top ones, so the bottom of these may rest on the top of the lower ones.

Handles steady them, so they will not move; but to economize space, the handles of the top layer might be removed, to permit the lid of the case to close down on the baskets.

Where the grower has large-sized berry crates, they might procure baskets to fit them, even if they did contain a trifle more or less in bulk. When baskets cannot be procured, the better way is to have boxes made to fit these cases, containing

about the same quantity; but, in order to ventilate the fruit, have the ends or sides of the boxes made a trifle higher than the other, to suit the package they may be placed in.

The above style of packages are also convenient for Currants, and even Grapes, when the owner has only a small quantity to market. Some growers of the very finest and choicest of fruit, make use of a case containing a chest of drawers; but, these are very expensive to purchase, and also to return empty.

For growers living at a distance too great to make use of these packages, on account of the expense of returning them, they will find that a small crate, containing from 15 to 25 pounds, will be as convenient as anything they can procure. Let them be made very light, and slightly ventilated. This style of package is generally used by the cherry growers living in the central part of the State, who send to this city.

Always weigh the packages, and mark their weight on them. With a stencil plate, have your initial letters, and the address of the consignee, placed on each, and if the package is to be returned, the name of the depot to which it is to be returned.

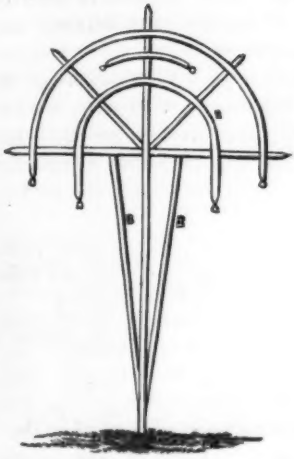
C. W. IDELL.

Rustic Supports for Climbing Plants in the Garden.

THE designs on the opposite page are from the pen of L. D. Snook, who has prepared them specially for the help of ladies in training their roses and climbing plants. He states in his remarks in the *Country Gentleman*, where the designs appeared some months since, that "the proper height is from four and a half to five and a half feet. The centre piece of each support should be at least three-quarters of an inch thick, and from an inch and a quarter to an inch and a half wide. Attach the lower end to a sharpened strip of cedar or chestnut, which can be driven in the ground, and when decayed replaced by a similar piece without injury to the support proper. Supports for climbers of the character here shown are universally painted white. To relieve the monotony and sameness, a pleasing and permanent effect may be produced by painting certain portions of them green on the side only, leaving the other parts white. Any farmer handy with tools, or any carpenter, can make them easily."

Timber Culture for Profit.

OUR farmers both East and West must soon awake to a realizing sense of an impending necessity. From 1860 to 1870, over 10,000,000 acres of wood land were cut down, and not one acre is found to replace them with bearing wood. Our best timber fields are fast disappearing, and those that remain far away in the remotest recesses of the Rocky Mountains, or in Oregon, will be too far off for economical and profitable transportation. Where shall we obtain our supplies? How much will we have to answer for, when with a stripped country, the cold winds sweep down from the North, with unrestrained and boisterous fury, and destroy with



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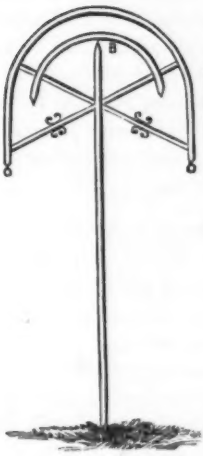

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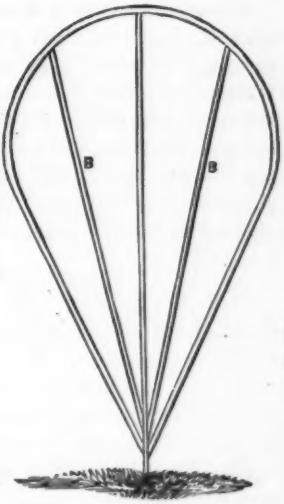

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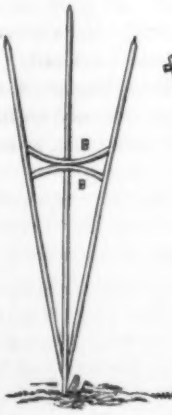

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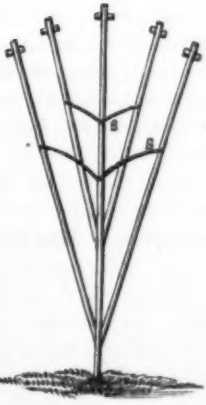

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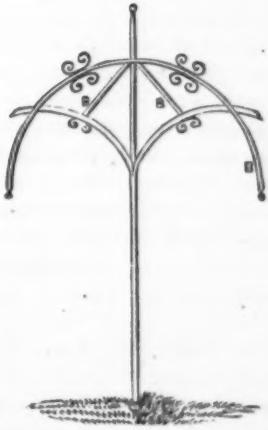

Fig. 6.

their sudden changes our fruit and ornamental trees, and imperil our crops, while one extreme will soon follow another, and unparalleled drouth cut off all encouragement for agricultural effort?

We *must plant timber lands*, both for shelter and for climatic preservation, as well as for future need and profit. *Begin now.* Every season lost is but increasing the danger of delay. We believe that if one-fifth of all land in cultivable farms throughout the United States, were to-day to be planted in timber, the remaining portions of each farm would be so much better tilled as to yield fully as good crops as the whole farms did previously, while in the ameliorations of climate, a vast good would be accomplished. We cannot too strongly urge this subject upon all cultivators both East and West, and hence throw in the influence of our Journal to help forward so noble a movement.

Growing Evergreens from Seed.

At the last meeting of the Kansas Horticultural Society, Mr. Robert Douglas related his experience in growing evergreens from seed, his mode of culture, transplanting and pruning. He saw no reason why evergreens cannot be successfully grown here. Other trees grow here that are quite as difficult to transplant. He was of opinion that the principal cause of failure is in planting too late. The idea has got abroad that the best time to move an evergreen is just as it is starting into growth. Such is not his experience; thinks the notion originated in the fact that nurserymen who have a large amount of work to do in the Spring, must put off something, and evergreens will bear delay better than deciduous trees; the latter are pretty surely killed by transplanting late, while the evergreen is only stunned. Since he came in, a gentleman had called his attention to a fact of great importance: The growth of an evergreen just transplanted, is no evidence of its vigor or of the formation of new roots and a good hold of the ground. The growth which it makes is entirely dependent on the buds formed the previous year. In these buds are stored up all the elements of the shoots made this year. Now, a tree planted out early will finish its growth early, and afterward go on making roots, and perfect fine, plump buds for a good growth next year; while a tree set late, although it makes the same growth this year, and appears vigorous, will next year only make a feeble, stunted growth, because its terminal buds were weak and imperfect.

Another important point is, to pack the ground thoroughly about the roots. A vast number of failures occur from this cause. Many think they have tramped the earth thoroughly, but if they will observe they will discover that the first heavy rain settles it still more. It is difficult to get the earth back into the same space with the closest packing; hence, it must be done with exceeding care. Loose earth should be thrown on the top to prevent baking. Last Summer was a very trying season for transplanting trees, and he took a trip through the country, among his customers, expressly to observe the effects of different modes of planting, and in the large majority of cases where evergreens had failed, he found the earth not firmly packed about the roots. Sometimes it will be made firm at the top, but a cavity left underneath. This is the most dangerous fault of all; a tree so planted is almost certain to die. When one has but few to set and plenty of time, it is better to raise

earth in the centre of the hole, in the form of a low cone or pyramid, and spread the roots carefully over it; but by all means avoid a bowl-shaped hole, lowest in the centre. The earth will settle most in the centre, and leave a cavity just under the stem, which is fatal. Never wait for a rain to plant evergreens; would not advise to plant in the mud, though he himself was often obliged to do it. Did not himself shade small evergreens when transplanted, but it is better, especially in this hotter climate. A good way is, after the growth is finished and the weather grows hot, go over the rows and shake a little prairie hay loosely upon the trees, not enough to cover them, but to break the force of the sun's rays. He imports nearly all his seed, simply because he can get it cheaper; sows broadcast in the Spring, in his shaded bed, and rakes in; sows thick enough, so that the little trees will soon cover and shade the ground. At one year old he sells off a part, thinning out the beds; runs a thin, sharp spade a few inches under the plants, and then they are easily pulled out. Those left in the bed, having the tap roots cut, will make fibrous roots, and are the same as transplanted trees.

The number of seeds in a pound varies from 15,000 to 320,000, so that no fixed value can be given as to the weight to be sown per rod.

Very small trees are most conveniently transplanted with a dibble, larger ones by digging a trench, laying the trees in, and lightly covering. Tramp them firmly with the foot, then throw on more fine earth. Evergreens may be trimmed just as safely as other trees, to thicken up or to change their form.

Progress of Tree Culture in Iowa.

There is said to have been planted last year in Iowa, not less than 15,000,000 trees. And a still larger number will be planted this year. Two farmers in one township have set out 25,000 trees. Progress like this is encouraging. Here we have an average of five trees to each inhabitant in the State planted out *every year*. A hundred to each inhabitant would still be only a moderate beginning. There ought to be an *acre* on the average to every resident of the State.

Rapid Growth of Trees.

The Larch tree is unanimously acknowledged the most rapid in its growth, and most speedily profitable. The European excels the native American variety both in height and breadth. Mr. Douglas, of Waukegan, Ill., has upon his grounds two trees fifteen years planted, each of which now measure forty-five inches in circumference at the collar. One tree nine years from seed, transplanted at one year old, measures twenty-seven inches; and one in its fifth year from seed accidentally left in the seed bed, measures nine inches in circumference at the collar.

Trees upon the grounds of E. Y. Teys, Richmond, Ind., and John C. Teas, Raysville, Ind., ten years planted, are upwards of thirty feet in height, and ten to twelve inches in diameter. D. C. Scofield, of Elgin, Ill., and Samuel Edwards, of La Moille, Ill., have trees of the same size.

Mr. S. T. Kelsey, of Ottawa, Kansas, has been planting very extensively the most rapid growing trees. He set out at first but twenty acres, fifteen of which was with black walnut, and the remaining five with several other sorts. They were planted in rows twelve feet apart, and about eighteen inches in the row, with a view, we sup-

pose, of thinning the rows as they become older. The ground is kept as well cultivated as a nursery, and the young trees are growing with great vigor. Among the trees under experiment are American Arbor Vitæ, European Larch, and Red Cedar, the latter under good care and on rich soil, we are informed, with a growth that would be surprising to any one that had only seen the native scrubby appearance. Mr. Kelsey has lately purchased in connection with J. H. Whetstone, 12,000 acres, which they have inclosed with a wire fence, at a cost of seventy-five cents a rod, and with No. 8 wire. Osage hedges will supersede much of the wire barrier, and the ground is ready for 100 miles of hedge to be set next spring. The tract is to be divided into forty-acre lots by hedges. Several miles of forest trees are to be planted in the spring.

The trees on the twenty acres already mentioned, were planted in 1867, and the present measurements are given as follows: Black Walnut, five to eight feet high, one to two inches in diameter; Soft Maple, eight to twelve feet high; Cottonwood, twelve to sixteen feet high, one and a half to three and a half inches in diameter.

Northern vs. Southern Nursery Trees.

THE *Southern Planter and Farmer*, of Richmond, Va., in its last February No., contains a critique on extracts from THE HORTICULTURIST, on this subject, which we propose to notice, although the Editor is perhaps able to row his own boat. First, THE HORTICULTURIST states the "reason why Northern pear trees are preferred, is because a larger percentage of all the trees grown in the nursery are good and reliable, well formed and vigorous, while in the South not over fifty per cent can be depended on as first class." This the Editor reports as coming from a reliable nurseryman, and says the remark is a very just one so far as personal observation has enabled him to judge of Southern nurseries. But on the other hand, the Northern Editor concedes the fact that we, of the South, "can raise better pears—larger ones—than at the North."

The Editor of the *Planter* says the above-mentioned nurseryman knows more than anybody down South, and adduces as a reason for the deficient supply, the events of the war, and claiming that better trees, at least larger for their age, can be grown South than North, because of a *longer* growing season. After some remarks as regards climatology affecting trees, he closes his critique with the remark "that it is time this matter was perfectly understood, and is tired of hearing any such superiority claimed."

Having planted about one thousand pear trees (and more of other fruit trees), many of which were obtained from Virginia, North Carolina and Maryland, the majority from Rochester, N. Y., and having had abundant opportunities of personal observation of all the larger pear orchards of our State, containing at present many thousands of trees, perhaps the writer might not be regarded as an incompetent witness to testify in a court of inquiry on the question mooted. First, there have been no pear trees grown of any consequence on Virginia soil, either before or since the war; and many sent from Virginia nurseries were purchased North. A few really

good, first-class pear trees have been grown at Staunton, Fredericksburg and Richmond, but not one-tenth enough to supply the demand which originated soon after the war, from Mrs. W.'s success, near Norfolk, with her 5,000 dwarf trees, now thirteen years old, grown by Ellwanger & Barry, at Rochester. The facts in regard to the matter of transplanting trees from a Northern climate to Virginia, appear to be as follows, in regard to certain kinds of trees: Apple trees remaining in Northern soil and climate beyond two years, and having a fixed Northern habit, are almost worthless transferred to our soil; on the contrary, one and two year old of any of our esteemed Southern varieties appear to bear earlier and fruit better.

This is the experience of the largest apple grower in tide-water, who sold from 200 Yellow June's (E. Harvest), Northern grown, nine years' planted, in 1867, $2,000 net worth of fruit.

Yearling peaches, grown in New Jersey, do well, fruiting some weeks earlier than the same variety North. With pears there is a marked difference in the subsequent health and thrift of the trees as to their birth-place, growing and training, and management of the stocks. The *soil* appears to impress a vigor of constitution or a feebleness; the one a stocky growth of well-ripened wood, the other, of the same age and variety, a slender, whippy, succulent wood growth, that falls an easy prey to the enemy, blight. I have seen a majority of the latter grown South, and of the former grown North, and many of the latter from both sections, of both dwarfs and standards.

In regard to the longer season which the writer claims as a decided advantage, it might be of utility, provided the same character and fertility of soil, with stocks, heavy strong English or French, transplanted, were used in both sections, but unfortunately when all goes pleasantly in mid-summer, with frequent evening showers at Rochester, Richmond and Fredericksburg, we have to contend with a hot, dry July and August, prematurely arresting the *first* and most *important wood growth* which the young trees make in the season, which more than compensates for any length of growing season claimed. If there are any two year old Virginia grown apple or pear trees as large as the three year old Northern trees, as the Editor claims, your correspondent has not seen them.

The village of Staunton, 120 miles above Richmond, beyond the Blue Ridge, heavy clay soils and colder climate, shorter season than at Richmond, exhibited at the last fair, *larger* two year old apple and pear, and yearling peach, than any grown at Richmond or Fredericksburg. Fertility of the soil and strength of stocks, with cultivation, have more to do with the size or growth attained in a single season, than a slight difference in length of growing season. Virginia has a great diversity of soil and climate, and while I verily believe there is as good soil for growing pear trees and other nursery stock, here as North, our nurserymen either have not found it, or they have failed in obtaining the best stocks.

We find the Pippin family of apples, and many of the esteemed Northern winter varieties, succeeding well in the valley and Piedmont country, all along the Blue Ridge. We grow the trees well in tide-water, but the fruit all prematurely drops diseased, with copper-colored spots. Our best winter apples are natives to the manor born, and very little disseminated. Early fruits for the Northern market, ripening before the last of August, only, are profitable. NANSEMOND.

Profit and Method of Forest Raising.

THE net profits of one acre of timber plantation, in fifty years, exceeds Fifteen Thousand Dollars.

This proposition I will demonstrate by facts and figures.

First.—In my estimate I will use the White Pine and European Larch, as I regard them the most valuable varieties for forest culture. It is a fact that a pine or larch plant, of six inches in length, set on rich or moderately rich soil in forest form, will attain a height in twelve years, of 30 to 35 feet, and a diameter at the collar of 8 to 12 inches. This is demonstrated on my ground in Elgin, in both pine and larch. Pine trees attain the height of 100 (one hundred) feet in fifty years, and a diameter of 3 (three) feet. We have abundant facts in proof in the Eastern and Middle States. The larch being a native of Europe, we have to go there for facts.

"Twenty years from planting of plants of 12 inches in length, trees were cut from which saw-logs of 18 to 20 inches in diameter were cut and drawn to the mill for lumber purposes. G. MARSHALL."

"Thirty years from planting, the forest was being manufactured into lumber by the steam-saw mills located in their midst, from trees of two feet and more in diameter and 80 to 100 feet in height. WM. HILL."

"We find by the Duke of Athol's measurement that trees planted by him in 1743, were nine feet and three inches in circumference when measured, four feet from the ground, in 1795, a growth of 52 years. SIR T. D. LAUDER."

Let me here remark, that the larch trees planted in 1743 here referred to, now stand 126 years from planting, 120 feet in height and five and one-half feet in diameter, as measured last summer (1868) by E. Y. Teys, of Richmond, Indiana. A pine or larch tree, therefore, of fifty years in forest plantation, is 100 feet in height and three feet in diameter, and will make 2,600 feet of lumber. This lumber, of either larch or pine, at the present price, would be worth not less than one hundred dollars.

I will therefore plant the larch or pine for my *Model Forest*.

Second. Method.—Prepare the ground the same as for corn, and a similar soil. Mark it with a plow for rows, three feet apart at right angles, and set a tree in each angle. To set one acre will require 4,820 trees. If you would have a pine forest there, set every fourth tree of that kind, and the balance with larch. This would require 302 pine and 4,418 larch. When the larch are all removed to give place for the pine forest, the trees will stand 12 feet apart, which is sufficient room for the full grown tree.

The cultivation should be sufficient to keep the ground clean from vegetation until the young forest will protect itself, which will be two or three years. When this has been planted six or seven years, every alternate row should be removed, leaving them three feet by six. These 2,410 larch, thus removed, are sufficiently large for grape stakes; their great strength and imperishable character rendering them of great value for that purpose. At the end of another seven years there should be cut every alternate row across, leaving the rows six (6) feet apart each way, which leaves 1,204 trees. These trees now removed are at least thirty feet in height, and

ten to twelve inches in diameter, and will make not less than 4,000 fence posts. At the end of another seven years, take away another alternate row of the larch through the plantation, or 600 trees, leaving the remainder 6 by 12 feet apart. These 600 trees, now 21 years in the plantation, are twenty inches in diameter and fifty feet in height, valuable for posts, railroad ties, spars of vessels, etc., and worth at least three dollars each. At thirty years from planting, remove another three hundred trees, leaving the "forest proper," the trees standing 12 feet apart, and 300 trees. If the entire plantation were made of larch, then a larch forest will remain, and if every 4th row were set with pine and the remaining trees were larch, then a pine forest is the result. One consideration worthy of notice, resulting from the larch plantation, is the enriching of the soil by the formation of at least a quarter to one-third of an inch of vegetable mold annually, from the falling foliage.

Thidly. Profits.—Seventh year cut, 2,400 grape stakes, net value at 5 cents each, $120; 14th year, 4,000 fence posts, at 25 cents each, net value, $1,000; 21st year, 600 trees, at three dollars each, net value, $1,800; 30th year, 300 trees at twenty dollars each, net value, $6,000. Total, $8,920.

In this estimate we have noted the net proceeds of the timber cut from the "forest proper." Three hundred trees now stand to grow on for future forest. Cut them away now and they are worth six thousand dollars. Let them remain ten years longer, and their net value is $9,000. Let them grow on twenty years, and they are worth $15,000. Making the total income from a single acre of timber plantation to be not less than Twenty-five Thousand Dollars in fifty years. A snug fortune to the young man who plants, and a rich inheritance to his children.

There is scarcely a man in the country who owns forty, or even twenty acres, but who can plant one acre. Nor one who owns 160 acres but could plant 10 (ten) acres.

These estimates are based on present values. Thirty years hence, they will doubtless be doubled.

D. C. SCOFIELD.

A Few Choice Fruits for Country Homes.

The Davison's Thornless Black-Cap Raspberry.

THREE years ago I was persuaded to try Davison's Thornless Black-Cap. My object is not to find fruits first for profit, but for enjoyment, and, possibly, profit afterward—fruits that will contribute to make a rural home delightful.

I have tested scores of all kinds of berries, and generally found it necessary to discard them, or else provide a doctor for each variety, whose whole business should be to study its whims and watch its ailments. But Davison's Thornless Raspberry I put down as about every way a good satisfactory home fruit.

In the first place it is hardy—as hardy as a Black-Cap that meets the sharp frost with sharper thorns. It is a superb bearer; if not equal to Doolittle, it is equal to any ordinary emergency, and after a good summer's crop, it inclines to be generous quite into autumn. For growth of canes, on my soil, it surpasses all other varieties. Before the crop of 1870 was completely gathered, the new canes had shot up clear over our heads; many of them twelve feet high. These were reduced to a proper height for stakes, and the side shoots reduced from time to time, and now the planta-

tion looks like a dwarf grove. The canes in size and strength were maximum. But what has all this to do with the fact that any one can crowd through, and under, and handle the bushes without one serious scratch. There are a few small thorns at the jointure of the leaflets, but they are only imitation. A lady's dress is safe, and the gatherer's hands are safe. Just contrast your experience with any of the thorny varieties—clothes torn, hands bleeding, and temper worse off than either clothes or hands. You are caught and twitched at every move. No sooner has one plague let go with a bit of your skin, than another takes you by the coat-tail; till you feel fairly whipped and afraid to enter. All well enough when urchins are hired to do the picking, and you never see a berry till they sit beside the cream bowl. But I want a berry that I can visit at its home, and eat out of hand, and not have to run for my life, as if I were a thief, for touching it.

I set the Davison about twice as closely as any thorny variety, and then mulch the whole surface of the soil with a thick covering of long manure and saw-dust. Raspberries naturally crowd together, and in their native condition shade their own roots. Of course thorny varieties must be set far enough apart to allow of free passage. The Thornless can be allowed to stand in hills far enough apart one way for the pickers, and far enough the other way to work between with a hoe. Of course I speak now of patches cultivated for home use, and not of large fields, where the object is the market. Alongside of Lennig's White Strawberry, therefore, set down Davison's Thornless Black-Cap, as a fruit for our country homes.

E. P. Powell.

Profits of Small Fruits.

An Essay delivered before the Annual Meeting of the Pennsylvania Fruit Growers' Society, at Chambersburg, Jan. 18th, 1861.

BY WM. PARRY, OF CINNAMINSON, N. J.

(Continued.)

Strawberries, Raspberries and Blackberries are usually included under the head of *Small Fruits*, the *profits* of which are generally good when markets are convenient and care is taken in the selection of varieties and in giving them proper treatment. Sometimes we hear of extravagant reports, calculated from the product of a small lot up to what a ten acre field under similar circumstances would yield. A safer rule is to take the acres and see what they have produced annually. We kept a debtor and creditor account for several years with twenty-two acres in small fruits, which averaged, after deducting expenses, $262 per acre.

By reference to the Third Annual Report of the West Jersey Fruit Growers' Association, page 21, who appointed committees to collect the returns from all the fruit growers in the neighborhood, it will be found that 776 acres of land in strawberries, raspberries and blackberries, produced the sum of nearly $200,000, or about $250 per acre.

Cranberries.—My remarks on "*Profits of Small Fruits*" would not be complete without referring to the cultivation of cranberries, which is a very profitable branch of small fruit cultnre, where the soil is adapted to their growth—and must eventually assume proportions and importance scarcely second to any other fruit crop grown in the State of New Jersey. We have thousands of acres unavailable for other purposes, but specially adapted to producing cranberries.

Low, marshy lands, and old ponds that can be drained and flooded again at pleasure, which in their natural state would not be valued at more than ten to twenty dollars per acre, after being cleared and planted, will often yield two to three hundred dollars per acre in cranberries annually, and sometimes more.

A fruit grower in Burlington county recently cleared up and planted twenty acres of moist land, which five years since was valued at five dollars per acre. Last year he had two acres in full bearing and eighteen acres only two years old; yet he realized from the cranberries grown there, a net profit of three thousand and two hundred dollars.

Another farmer and his sons, residing near by, have two hundred acres planted with cranberries—about one-third of which are in fruiting and yielded last year 3,300 bushels of fruit, worth over $13,000. Six acres of which averaged one hundred bushels per acre, and were sold at four dollars per bushel.

Another farmer in the same county had, in 1869, twenty-four acres in fruiting; six and a-half in the tenth year of bearing, and seventeen and a-half in the first year of good bearing—which yielded 2,692 bushels of cranberries, and sold at three and a-half dollars per bushel, brought $9,422; and after deducting $2,222 for expenses, taxes, superintendence and commissions, left a net profit of seven thousand and two hundred dollars on the twenty-four acres: Averaging three hundred dollars per acre.

The six and a-half acres in the prime of bearing yielded more bushels of fruit than the seventeen and a-half acres just commencing.

The Forge Company, near West creek, in Ocean county, N. J., have about one hundred acres planted, fifty of which were in fruiting the past season, and yielded 3,400 bushels of cranberries, worth, at four dollars per bushel, $13,600. Three-eighths of said tract was recently sold at one thousand dollars per acre.

I might mention the names of those parties, if necessary, but the object in referring to them was merely to enforce the principles and facts illustrated by their successful operations, which many others are pursuing; and hundreds of acres are annually being redeemed from a primitive, unproductive condition, and devoted to cranberry culture.

There are now in New Jersey about two thousand acres in fruiting, and produced last year 150,000 bushels of cranberries—and 4,000 acres more land have been prepared and planted and will be in fruiting hereafter. New Jersey now supplies more than two-thirds of the whole amount of cultivated cranberries marketed in the United States.

The late reports by the Agricultural bureau at Washington, for the year 1869, gives as follows, viz: to the

State of Maine.....	1,000 barrels.
Massachusetts	8,000 "

State of Connecticut	2,000 barrels.
and New Jersey	50,000 "
This amount of	61,000 barrels

was derived principally from cultivated fields. All other States and Territories, including wild and cultivated cranberries, produce about 14,000 barrels; making a total of 75,000 barrels for the year 1869. The crop for 1867 was estimated at 62,000 barrels, of which New Jersey produced 35,000; New England about 12,000, and the West 15,500 barrels. The average price for 1867 was $16 per barrel—giving a total value of one million dollars for the crop that year. The crop of 1869 commenced to sell at picking time, in Philadelphia, for nine dollars per barrel, and gradually advanced in price until spring, when the market value was twenty-four to twenty-six dollars per barrel! One grower in Burlington county, it is reported, sold a lot of six hundred barrels for fifteen thousand dollars.

The price of cranberries during the present winter has been about twelve dollars per barrel in Philadelphia.

For seven years, from 1862 to 1869, the price ranged from fourteen to fifteen dollars per barrel, except in 1868, when the price was from twenty-two to twenty-four dollars per barrel, owing to the light crop.

The counties of Burlington and Ocean yield the greater part of the cranberries grown in our State; and in 1869 they produced 31,700 barrels; and all other counties in the State yield 18,300 barrels. The yield of cranberries last year was not so large per acre as in 1869, on account of excessive rains, with intervals of intensely hot sun during the time of blooming. But the quantity of land in fruiting was more, so that the yield for Burlington and Ocean counties amounted to 38,300 barrels, and the State producing about the same as in 1869—say 50,000 barrels—which, at the present value, gives $600,000.

In embarking in the cranberry business, one of the most important matters is the selection of suitable land. The most productive cranberry region in the State is a belt of land underlaid with white sand, much of it pure silex, the upland covered with pine and scrub oak, the lowland and borders of streams with white cedar and an undergrowth of whortleberry bushes. The soil is light, a thin coat of vegetable mold covering the surface. The climate as well as the soil of this part of New Jersey is well adapted to the cultivation of this vine in the highest perfection.

The picking is usually done by men, women and chidren, at a cost of about fifty cents per bushel; many of the hands will gather three to four bushels each per day.

In sections of the country where strawberries, raspberries and blackberries are extensively grown, a good portion of the pickers come from the rural or cranberry districts, commencing with strawberries in June, and after finishing them, enter the raspberry fields in July, and in August the blackberries are gathered; after which they return home in time to commence in the cranberry fields in October, and frequently have steady work there until cold weather, thus having a long continuous harvest. Such of them as are industrious and frugal, may soon provide homes for themselves, and become proprietors of berry fields, and in turn give employment to others who are pursuing the same course of honest industry—a sure passport to wealth and competence.

Editorial Notes.

Carbolic Soap for Peach Borers.

In THE HORTICULTURIST for last month, in speaking of my remedy for the peach borer, the editor suggests that five pounds of soap to a barrel of water will make the liquid too strong, and prove injurious to tender roots if it reaches them. I have only to say that I have found no injury to result to bearing trees from this cause; but for young or small trees I would use about eight gallons of water to the pound of soap. Here I will answer the inquiry of a friend in Tennessee, who writes to ask me the capacity of a "barrel," or how many gallons of water I use for five pounds of the soap? The usual barrel, as a liquid measure, is thirty or thirty-one gallons; but in this case a few gallons more or less is not material—but safer more than less. I am using this liquid on apple trees with evident good effect. Will not other orchardists experiment with it and make known the results? M. B. BATEHAM.

How to Pack Strawberry Plants for a Journey.

Take up good, sound, young and well established runners; remove all decayed leaves, tie them in bunches of twenty-five or fifty, with their crowns evenly arranged; wrap in moist, swamp moss; pack tight in an open box, with the crowns upward, and nail slats across the top to keep them in, and yet allow free access of air. Thus shipped, they will go long distances without injury. The best season for shipping in spring, is the last of April, and in fall, middle of September. Nurserymen sometimes take up large quantities and heel them in during the winter, and thus are able to ship very early the next season to Southern localities, or more distant points. In New Jersey it is a common practice to pack in barrels with the tops out, slats cut open for ventilation, and the roots turned toward the centre, and the vacant space filled in with wet sand. If the weather is cool they will go reasonable distances without any injury, although we are of the belief that in warm weather such a practice would be unsafe, and might cause fermentation. Plants should never be packed loosely, nor shipped in an unarranged mass. It is better to charge a little higher price and do the plants up more neatly.

Be careful of the Roots of Newly Dug Trees.

No newly-dug tree should have its roots exposed to the sun or drying winds for a single hour. We have seen instances of ill success where roots dug from the moist, cool earth, are exposed to the sun and drying winds for a full half day, or even two days; and it seemed as if all the arts of the planter could not coax life and energy into the tree. In transplanting trees the roots should be kept cool and moist, or as near the original temperature or condition of the soil they formerly occupied; otherwise evaporation takes place, which is hard to restore, and life gradually dies out. It is safe, then, for any one to refuse to take trees from any peddler or nurseryman which have been exposed to the air for over a half day.

Mowing off Strawberry Leaves after Fruiting.

Quite a number of strawberry growers have expressed incredulous opinions of the practicability of this plan, to which we reply that in every case that has come under our notice, it has been a complete success. Indeed, one gentleman in Central New York stated last fall to us that he had practiced it uniformly for eight years, and had never been obliged to reset his plants or renew his bed; while the luxuriance of his plants, and size and quality of his berries were matters of great notoriety in his own neighborhood. The propriety of cutting off all the old and exhausted stems, leaves, etc., after fruiting, will not be questioned, we think, by any one. We would only add, by way of caution, that wherever the plants are thus mown, and tops cut off, it is imperatively necessary to protect the crown with some mulch, until it shoots out a sufficient quantity of fresh green leaves to enable it to take care of itself. The following letter, confirmatory of our ideas, was written recently by Ira Smith, of Peoria, Illinois, to the Farmers' Club, New York City:

"Observing frequent inquiries made of the Farmers' Club regarding the propriety of mowing strawberry plants after fruiting, and that the members have been rather shy in giving an opinion, I offer the following experience of my own: About ten years ago, noticing, as had frequently occurred before, that after fruiting, the weather being hot and dry, many of my plants apparently fresh and healthy in the morning, would lie flat on the ground, withered, and seemingly nearly dead at night, as though something had severed the roots and cut off the supply of moisture. This being often repeated for a month, half of the plants would sometimes be dead, and the rest greatly injured. All strawberry growers have witnessed the same. It is called here sunscalded. On examination I found the roots whole, sound, and in good order, except as dry as a chip. The following hypothesis was then suggested to my mind as the probable cause: after putting forth their utmost strength in the production of a bountiful yield, the plant now, like all else of animated nature, including man, and, from accounts, divinity itself, requires a season of rest, and cannot at once replace the exhausted energy of the rootlets so as to gather in sufficient moisture to meet the excessive demand for evaporation from the leaves. The roots thereby being sucked dry, death necessarily follows from starvation. The remedy, then, must be in removing the demand for evaporation. The test was made by mowing a portion of the patch close down, and was attended with perfect success. Since then my practice has been, after fruiting, to mow them close to the ground, and if the weather is hot and dry, scatter the leaves evenly over the beds, and after thanking them for their nice acid fruits, bid them rest in peace until August and September showers come with their life-restoring influences. Under this treatment I never lose a plant, however hot the weather may be. After August rains they recommence to grow, putting out no new runners, but covering the ground with large, dark, thrifty foliage, and the largest and freshest new crowns for the next year's crop, and never fail in giving a first-class yield for the season."

Dwarf Pears.

At the Farmers' Club, N. Y., in answer to a question whether "Dwarf Pears can be converted into Standards by planting rather deep and hilling earth around the stem?" Mr. A. S. Fuller remarked, that they will nearly all become standards if the junction of the pear stock upon the quince root be put four inches below the surface. It is a good practice to remove the earth and cut several gashes at the swell of the graft, then replace the soil, and new roots will come out upon all sides, and the tree is therefore less liable to be upset by heavy winds.

Mr. Quinn remarked, in answer to a question about distances, "that twelve by sixteen feet is, I find, by long experience, the best interval for pear trees. Being thus near together, they protect themselves to a certain extent. I adopt the practice of having the fruit as near the ground as it can be well induced to grow. I prune to a cone or Lombardy poplar shade, so as to get a slim, tapering tree with fruit near the

stem and near the ground. The only objection to this style of pruning is, that you cannot use your pear orchard as a pasture. But that is seldom desirable. If the trees are twelve by sixteen, they will tax the ground heavily enough without requiring it to grow grass. My success has come from four practices—rich manuring, close planting, open top pruning, and mulching."

Mulch as a Manure.

An experienced farmer once found, by experiment, that where he mulched his wheat land with veitch, he had an increase of crop of twelve bushels per acre; and he invariably found that land which had been sheltered during the previous winter from the action of the atmosphere, frost, cold, etc., was always more fertile than any portion of his adjoining land, even under a high state of cultivation. Our use of mulch upon small fruits, also confirms the above theory, for a good mulch invariably increases the production from fifteen to twenty-five per cent, as well as contributing very materially to the size, color and cleanliness of the fruit. We believe that mulching will always pay.

How Long will Asparagus Beds last?

As long as they are well taken care of. On the Mt. Pleasant property, in Amherst, Mass., there is an asparagus bed which has been in bearing for fully thirty years past, and in other sections of the country beds have been known to live for fifty and seventy-five years. In the vicinity of London the gardeners renew their beds every twenty years.

The Bartlett Pear.

The sale of the Bartlett Estate, on Boston Highlands, recalls the history of this pear. Mr. Enoch Bartlett, the former owner, was Vice-President of the Massachusetts Horticultural Society for many years, and was quite a noted horticulturist. Forty years ago he brought from his estate a choice pear, never before seen by the members. Mr. Bartlett and the members of the society supposed it to be a seedling pear, and out of regard to Mr. B., was named the "Bartlett Pear." But, in point of fact, this was an old English pear, well known there as "William's Good Christian," and had been imported by Mr. Brewer, who built the Bartlett house and laid out the grounds, some time about the year 1815. But the estate being, after a few years, sold, and passing into other hands, the history of this tree was not known until Mr. B.'s introduction of it to the Massachusetts Horticultural Society made it famous.

The Matilda Strawberry.

Mr. A. S. Fuller, in his report in *Horticultural Annual*, 1871, at last confesses that this variety does not maintain its promise—"it is splendid in every respect *except quality, and in this I fear that it will disappoint those who have better sorts.*"

Our readers will please notice that this variety of strawberry is the very one exhibited at the Fruit Growers' Club, three years since, and for which the Editor of THE HORTICULTURIST received some entirely unnecessary criticism, because a premium was not awarded to it. It is gratifying at this late date to find the opinion of the Editor, who was then one of the judges, thus confirmed by one who was at that time among the very first to express dissatisfaction.

Peak's Emperor.

Mr. Fuller says of this: "There is a possibility of this proving to be the Agriculturist, or a seedling therefrom, so closely resembling its parent that good critical judges cannot tell the difference. It is claimed, however, that it was raised prior to the introduction of the Agriculturist; but this has not been proved to the satisfaction of all parties, and until it is, I shall consider them one and the same variety."

Florence Strawberry.

Mr. Fuller thinks this is "so nearly like its parent 'Wilson,' " that I do not think it should be disseminated as a distinct variety."

The Rural Club of New York.

We have not had space hitherto to notice properly this new and strong association of rural character. It numbers nearly 50 persons of prominent literary connections, or gentlemen of wealth, taste, and a love for rural life and subjects of horticultural progress and refinement. Two meetings have now been held at which an association of guests and members participated in a fine collation, after which there was discussion upon Flowers, Seeds, etc. It will, when fairly at work, have considerable prominence, as New York has never, hitherto, maintained a purely Horticultural Society successfully for any great length of time. This club hopes, by bringing in more of the social and festive element, as well as all branches of rural discussion, to create and keep up a society of high character, and realize a wide spread influence. At the last meeting, speeches were made by Horace Greeley, Hon. Geo. Geddes, S. B. Parsons, A. H. Green, J. S. T. Stranahan, Andrew S. Fuller, N. C. Ely, P. T. Quinn, Dr. F. M. Hexamer, J. B. Lyman and others. The officers are: Horace Greeley, President; J. B. Lyman, Recording Secretary; A. B. Crandell, Corresponding Secretary; H. T. Williams, Treasurer.

The association meets only quarterly, and the next session is about June 15th; discussion both practically and esthetically of *Strawberries*.

Garden Culture of Strawberries.

We find by experience that if cultivators will allow more room for their plants to form good strong hills, the produce will be much greater and the berries much larger. Two feet apart is near enough for large hills, and just before setting out the plant we would throw down a big forkful of well-rotted barn-yard manure. It is well also to add a couple handfuls of bone meal or superphosphate. This has an admirable effect in producing large quantities of berries. The bed system of growing Strawberries, rarely is satisfactory; it is an immense trouble to keep it clean, free from weeds, and almost impossible to control the plants and prevent the too free formation of runners. Where the parent plants are neglected, and runners allowed to form freely, depend upon it, the bed is beginning to run down. The hill culture of Strawberries and careful clipping of runners is the only judicious system of management. An item worth noticing is this, that on heavy lands your berries will be late, but the produce will be very heavy, while on light lands the produce will be light, and also very early. For family purposes we recommend the very richest part of the garden; yet we would not stimulate them too much with ammoniacal manures. In fact the best crops we ever had were grown upon land where bone meal had been used with great liberality. There are some soils upon which must be grown particular varieties. For instance, the Triomphe de Gand must be grown upon clay land; Jucunda upon shaly clay; Russell's Prolific and Wilson's Albany will always do well on light loamy land; La Comtante must have a cool Northern climate and heavy land. Of the later and most desirable varieties, Boyden's No. 30 and Charles Downing will grow well almost anywhere; Barnes' Mammoth variable, but does well on light land, if runners are allowed to spread moderately around the parent vine. There are few or no soils we have yet heard of but will grow one or more varieties of delicious Strawberries, but *careful* culture every week during the season is the only way to be successful, no matter what may be the soil or manure.

Labels.

Wooden labels for plants to be inserted in the ground, may, it is said, be preserved for an indefinite time by first dipping them into a solution of one part vitriol and twenty-four parts water, and subsequently immersing in lime water, or a solution of gypsum.

Wauregan Raspberry.

The same authority regards the Wauregan as "no more or less than the old Belle de Fontenay, a hardy, perpetual bearing sort, well known among nurserymen and fruit growers."

Woodward's Gardens, San Francisco.

Mr. R. B. Woodward the proprietor of these famous Gardens, has been lately adding some new and choice botanical specimens from foreign countries; orchidaceous plants are well represented. In the green houses is a superb specimen of the Banana plant, just in flower and forming its young fruit. The Pine Apple is represented in 20 or 30 plants now in fruit. A fine collection of Azaleas in full bloom is represented there, as also plants of the *Dracæna fragrans*, the Phormium tenax (*New Zealand flax*), the Ramie plant and a score or more varieties of the Acacia. In the new Mammoth Pavilion, Mr. Woodward gave a fine entertainment to 10,000 Sunday School Scholars recently, which was one of the most enthusiastic and delighted audiences ever gathered together in that city.

Curculios.

The easiest way undoubtedly to kill the Curculio is to spread a sheet on the ground, then jar the trees, and destroy the fallen fruit. The jarring must be done in the cool of the morning, while the Curculio is dormant and before the sun warms him up. A correspondent of *The Ohio Farmer* tried this plan on four choice trees that had been set fifteen years from which he never got a dozen perfect plums. "The first morning that I spread the sheet, as I had never seen the *critter*, I did not know what to look for. I picked up what I supposed to be a plum bud, but on giving it a slight pressure found it was alive. The first morning I caught one hundred and three; second, ninety; third, fifty-one; fourth thirty; fifth, eleven; and sixth, one."

The Rutter Pears.

Mr. Satterthwaite in his remarks about Pears at Chambersburg, Pa., last January, commends specially the above Pear. It is one of which fruit cultivators generally have heard very little, and hence we quote Mr. Satterthwaite's remarks in full. "A splendid, large and exceedingly productive pear of first-rate quality, very remarkable for bearing enormous crops from the time the tree is first planted, and the tree all the time is making the most vigorous growth. It is also an excellent keeper. I consider this a fruit of great promise."

A Little Bed of Herbs.

Every family should have its little patch of "Herbs." They are easily obtained; some of them are perennial, and require replanting only once in several years. The seed can all be found at our agricultural and horticultural stores. The list is as follows: Sweet Marjoram, Marigold, Thyme, Winter and Summer Savory, Coriander, Aniseed, Rosemary, Lavender, Sweet Basil. Caraway, Fennel. Thyme, Winter Savory, Fennel, Lavender and Sage are perennial; the others require the seed to be sown annually.—*Germantown Telegraph.*

Susquego Raspberry.

Mr. Fuller says, in his notes on Small Fruits for 1870, "it is a dwarf-growing variety, resembling the Pearl, a native red raspberry, cultivated to some extent by small fruit growers in the vicinity of Philadelphia. It is one of the very best of our native sorts, and by keeping the plants well mulched in summer, they will continue in fruit for at least two months. Like all our native red raspberries, it produces a great many suckers, but the canes are perfectly hardy, and generally quite productive."

American Pomological Society.

The Biennial Meeting of this Society will be held at Richmond, Virginia, September 6th and 7th next. This meeting will be an unusually interesting one, and is likely to draw a large number of fruit growers together from the South especially. We think that there will be but a small attendance from the North.

Naomi Raspberry.

The same authority states: "I am confident that it is nothing more nor less than the Franconia."

The Blight in Pear Trees.

Several nurserymen in Geneva, New York, are now using salt freely in their Pear Nurseries, at from 200 to 400 lbs. per acre yearly, and say that it has a wholesome tendency to correct the disposition to blight, as also to prevent it for the future. Certain it is that where used there have been less indications of its prevalence than in other parts where it was not used. We believe that salt is yet to play a very important part in our agriculture and horticulture as a top dressing or for mixture with concentrated manure. It is now, together with lime, the very best of all applications to mix with muck and reduce it to a friable condition. *Iron* shavings, copperas in solution have also been used, as also Potash manure, and been found of special efficacy in restoring the trees to full health and renewed vigor. An instance in point is just related by a correspondent of the *Rural Messenger:*

"I had a very fine pear tree (Flemish Beauty) that became affected, first by blight in one limb, which I removed, and then another and another was affected in the same way, until I had removed a considerable portion of the top of the tree. Early next spring I resolved to try the application of scrap iron to the roots. I procured my iron, removed the soil from the roots carefully, deposited the iron between them, and replaced the earth. There was no further progress in the blight, the tree continued to grow that season, and the next leaves and blossoms came out vigorously, no black spots appeared on the leaves and the tree bore finely, and no appearance of the disease was in the tree afterward. In subsequent conversation with friends I found that some of them had become informed on the same subject, and had tried the same remedy with perfect success. Some told me that they had procured turning and drilling chips from the machine shops and had used them, as they thought, with much advantage to their trees.

Prospects of Fruit.

In Delaware the prospects for Peaches promise the largest yield ever known. Strawberries will be a moderate crop, about $\frac{1}{4}$ to $\frac{1}{3}$ have been injured by a frost in the latter part of April.

In New Jersey there will be but few Strawberries, serious frosts having damaged them severely.

Around Cincinnati, nearly all the Strawberry blossoms were destroyed by frost.

In Central Illinois, the prospect for fruit is excellent, although some sections have suffered severely from late frosts.

Pears all over the country will be only a moderate crop, not over $\frac{1}{2}$ or 3-5 of last year. We think that the prices of all fruit will be well maintained, this year,—and less gluts than usual.

Iron for Pear Trees.

A correspondent of *The Country Gentleman* says that if *copperas* and *saltpetre* water are used around Pear trees, the trees will show the effects in a large yield of fruit. He tried this on a Bartlett Pear tree that had yielded no fruit for two years previous; that very year it yielded 155 large fine pears, and the following year 250 equally fine ones, and is still doing finely. "If Pear trees want iron, which most of our soils is deficient in, sulphate of iron or copperas is a good way to supply the deficiency."

Potash Fertilizers.

These German Salts of Potash have been introduced into this country, and some sales have been made. We are informed that these salts now sold here are not genuine Leopoldshall Kainit, but adulterated or calcined and ground with other materials. Only one person, Otto Radde, has the exclusive privilege of exporting these salts from Germany, and a guarantee goes with each lot sold, from him. We are experimenting with the lot now imported and sold here, and will investigate the value of them.

Ever-blooming Roses.

Coleman's Rural World says that many persons are disappointed because their roses do not bloom constantly all summer, expecting from their title of Perpetual that they should do so.

Now, the class of roses called Hybrid Perpetual, or Remontante, is not exactly rightly named—that is, they do not bloom perpetually, but only at intervals. They bloom full in June, and then give a few scattering blooms along during the summer, and a good display again in Sept., doing better or worse, according as they are illy or liberally treated. This class, however, possesses the most brilliant colors, largest sized flowers, and fullest and finest shapes, and is deservedly very popular. But the true and real ever-blooming roses belong to those classes usually called tender roses—the Bengal or China, Tea, Bourbon and Noisette; these, though more tender, and less robust than the other classes, are not absolutely tender, but, in our latitude, by selecting the hardier varieties, may easily be preserved through the winters by necessary protection.

The simplest and surest method of protecting these classes of roses, is to peg them close to the surface of the ground, then cover with a few inches of coarse litter. Strawy stable manure is best, in our opinion. Throw on a little soil to keep it in place, and do not fail to cover the crown of the plant. Even if such manure is drawn up around their stems six or nine inches high, the roots and lower branches are saved; and if the tops get killed, they can be cut down, and they will bloom as freely as though all the top had been saved. This latter plan can only be adopted where the plants stand closely together in beds, which, indeed, is the most effective way to grow these, as well as the Remontante roses. Beds should be prepared exclusively for their benefit, and if the soil is a clay loam, well rotted manure may be added, and the beds spaded deeply, raising the surface of the bed a few inches above the natural level of the ground.

The plants of these dwarf-growing varieties may be distributed about three feet apart over the beds, and a vigorous growth should be kept up by clean culture, stirring the soil often, top-dressing and digging in annually.

The following would comprise a dozen good varieties for such a bed; some one would choose other varieties, doubtless, but these are believed to be as good as any.

Hermosa, pink; Duchess de Thuringe, waxy, clear white; Cels, creamy white; Gloire de Dijon, blush and yellow; Eugene Beauharnais, deep crimson; Madame Breon, rosy crimson; Bougere, bronzed rose: Amie Vibert, pure white; Daily Pink, a profuse bloomer; Agrippina, rich velvety crimson; Triomphe de Luxembourg, salmon buff; Saffrano, fawn color shaded rose.

The Best Pear.

We notice that the testimony of experienced fruit-growers now points to the *Beurre d'Anjou*, while the *Lawrence* fully equals it in popularity. It is hard to decide between the two, but we believe there is more *money* to be made by planting the latter, as it is a much more prolific tree when full grown. The Beurre d'Anjou loses its size very much if allowed to hang too full on the trees. It needs thinning more than any late Pear we have. As a Dwarf it is superb; and we think in time will be found quite as profitable as the Duchesse d'Angouleme. The *Beurre Clarigeau* is acknowledged to be the very handsomest of all our winter varieties; but somewhat unreliable as to dropping both leaves and fruit before it matures; hence cultivators are planting it very cautiously.

How to grow Canteloupes or Musk Melons.

The public seem to be inclined to drop the familiar name of Musk Melons, and are adopting the old style cognomen of *Canteloupe*. The *Germantown Telegraph* says that the culture of this garden fruit is becoming more general. Almost every person having a garden of any size is beginning to try his hand at it, and it can be done with almost as much success as raising a crop of corn. The ground should have a

warm exposure and be friable—clay mould not being adapted; the hill should be dug out eight to ten inches, two feet in diameter, and filled with well-rotted manure, rich soil and sand—turnpike dirt is excellent as a substitute for the latter. Five or six seeds should be put at equal distances about an inch in depth, and the "hill" should be even with the other soil. The hills should be about six feet apart each way, and the plants, when they have passed all danger, should be thinned out to two or three in a hill. The beds must be kept clear of all weeds and grass, and when the vines commence running they should not be disturbed, as the rootlets connected with the vine, and by which it is largely supplied with nourishment, will be broken. The ground, as the vines begin to extend, should be gone over with an iron rake, especially after a heavy shower, to loosen it and give these rootlets a chance to take hold. The seed should be planted at the time of corn-planting.

Sowing round the hill, a few inches distant, early radish seed, will sometimes protect the young plants from the bugs, and always will be more or less beneficial. Should bugs appear, a sprinkling of weak whale-oil soap and water will soon send them adrift.

The best variety of canteloupes to plant, in this section, is the "Citron," the "Jenny-Lind," and "Cassaba." The Nutmeg is too late for us. There is a *white* canteloupe, which is remarkably fine, but it seems only to be a "sport," and not a distinct variety.

There is no reason why all our farmers should not have a patch of canteloupes for family use. A plot of ground 40 by 20 feet would be enough for a moderate-sized family.

Trimming Evergreens.

I am often asked the question: Can evergreens be trimmed, and if so, when is the best time? After quite a number of years' experience, I have found the best time for trimming pines is after they have made most of their growth, that is, the White Pine, Austrian, Scotch and Corsican.

Evergreens grow in the first part of the season, and after they are nearly done growing, before the wood becomes hard, pinch the new wood off with the thumb and finger, or cut it with a knife. This, I think, is the best way to trim pines.

For Norway, Spruce, Balsam and Fir it is best to trim early in the season, before they commence growing, say from the first of March to the last of April. The Balsam does not require much trimming, unless it is cut off the side limbs, so as to keep the tree in good shape. If the top is cut off, the growth will be retarded very much, in some cases for two years or more. But this is not the case with the Norway and Spruce, if the top is cut off, it will make a vigorous growth in the same season. As the wood is hard, it is best to use a sharp knife. Hold the knife so as to cut from the underside, then it will not show.

For Junipers, Arbor Vitæ and Red Cedar, the best tool to trim with, unless large limbs are cut, is a pair of sheep shears.

Persons wishing their trees trimmed will find this way very good, and resulting from experience. A very little time spent will keep any tree in good shape.—*Cor. Medina, O., Gazette.*

Vicar of Winkfield Pear.

John Jay Smith says in *The Gardener's Monthly*, that he priced Vicar of Winkfield Pears in one of the Philadelphia fruit stores, last January, and the modest price asked was 75 cents each,—they were very large and fine.

Phlox for Garden Culture.

We know of but few varieties of hardy plants that better repay the grower than this very beautiful and desirable diversified genus, that will afford such variety of colors and prolongation of bloom. In colors, we have them from pearly white to deep crimson, with all the intermediate shades and variations, many of which are highly fragrant. They will grow well and bloom profusely in sunshine and in shade,

making them well adapted to any location, and one of the most useful plants we have for shrubberies or gardens—are especially to be relied on for the flower garden, because they require but little care, in fact they care for themselves; are of the easiest possible culture—growing and blooming well in any good garden soil—and are easily grown from seed. Seedlings blooming the second year are easily propagated from cuttings; also, by division of the roots. Every eye with a bit of root will grow readily. Division of the roots should be performed early in the spring as they start into growth, or in the fall, immediately after they are done blooming. When stirring the soil around them in the spring, they should be examined, to see that they are not too high out of the earth, as there is a tendency with them, as with most herbaceous plants, to grow out of the ground, or be heaved out by frost. When this is found to be the case, take up and re-set the plants before their growth is too far advanced. You will be amply repaid with a finer show of bloom and a greater luxuriance of foliage by forking in a little well-rotted manure around the plants each season; also, by pruning out the weaker shoots. An occasional watering, should the season be dry, pays well. This splendid genus has undergone great improvements in the past few years under the eye of the florist, in the size of its trusses and the brilliancy of its many fine colors, as well as the prolongation of its time of blooming from spring to autumn.—*Ex.*

House Plants.

At a late meeting of the Rhode Island Horticultural Society, there was some pleasant talk about *House Plants.*

Mr. Levi Metcalf said he had been quite successful this and previous winters in raising varieties of hyacinth, and other plants, in pots, in a Wardian case at a window, where the plants had the sun about two hours and a half every day. The case should be kept open, or they need expect no blooming plants. The hyacinths would look, after the sun had shone in on the closed case, as if they had been dried or steamed. At night, however, when he lit the gas, he would always close the case. He would recommend everybody to have a case of the kind, rather than to grow plants in or upon a window. The case had better be laid on a table, lined with zinc. Fill the case half full with good clean sand, put the sand in dry; the moisture would go through the pots and the glass would be wet in the morning, sometimes too much so. The general trouble in growing house plants was that people lived in too warm rooms. Most plants were best suited by a temperature of about fifty degrees, while some plants grew better in a higher temperature. About fifty degrees was best for japonicas, geraniums and carnations, while most people like to have their rooms at a temperature of about seventy degrees.

Where a person had but a few plants, they could be cleared of insects at any time they chose, but he thought it indispensable to take out decayed matter from the case as soon as convenient. He was in the habit of re-arranging his plants once a week or so, as a means of refinement.

The president thought there was very little difficulty in growing hyacinths in the house in pots. He begun ten years ago, and soon arrived at one result, that for plants to flourish in the house there must be moisture in the air. He lived in a large house, heated by a furnace, the air was very dry, the furniture cracked with the heat, there were seams in the doors, and the skins of the people residing in the house appeared parched and dry. He introduced a system of ventilation, and found that a great change followed for the better. The furniture no longer cracked, the seams in the doors closed up, throat and lung ailments ceased to trouble the inmates of the house, and the plants began to flourish. From this experience he drew the inference that the air necessary for plants was also necessary for the good health of men, women, and children. He had been led more lately to believe that lack of ventilation affected plants even more than lack of moisture. Sulphuric acid accumulated in rooms kept closed for some time, and that acid was fatal to plants. With his rooms

properly ventilated, however, he had found that the plants flourished as well as in the old-fashioned houses with fire-places. Plants needed occasional washing, and to be kept carefully clean of insects. He had carried one hundred plants through winters, on all sides of the house, north, east, south and west, without losing any of them, and having flowers all the time. Another gentleman said that epsom salts were effectual in removing insects from plants.

Petunias.

This old, well known, popular bedding plant, has been most wonderfully improved during the past ten years; from the small, single, self-colored varieties have been produced the most gorgeously and elaborately marked varieties; beautiful double ones with the sweetest fragrance.

Coquette—Changeable ground colors of purple and white, with distinctly defined bars of blue radiating from the centre outward.

Fascination—Clear, fine rose, with white centre.

Lady Douglas—Purple and Violet, shaded white.

Striata Superba—Pure white, blotched and striped carmine; beautiful.

Warrior—White lilac, striped carmine.

Above are single varieties; the following are double:

Inimitable—Flowers blotched, the centre petals are richly flaked with white and violet.

Marginata Monstrosa—Flowers four inches in diameter, beautiful mauve flower, tipped and splashed with green.

Edward Beech– Clear white ground, striped dark chocolate; fine.

Queen of Whites—White, very double, fragrant, and the best white yet produced.

Albert Victor—Double; lilac purple; good.

Heiress—Solferino, mottled and shaded white.

Duke of Argyle—Lilac and purple, veined white.

President Lincoln—Imbricated carmine and white with deeper shade; very sweet.

Annie—Brilliant white, blotched and spotted violet and crimson.

Atalanta—Rich crimson ground, shaded rose, with inner petals edged green, and outer ones with dark green belt; very fine.

Sherman—Scarlet and crimson, with distinct blush shade, one of the best.

The Petunia is easily handled, its great requisites are light and a good soil. It will not prosper in a shaded situation. Succeeds well on mounds, where it should be pegged down to give it a good bedding form. Cut away most of wood when lifted in the fall to bring to conservatory, or for keeping in cellar over winter.—*Thompson in Rural World.*

Japanese Lilies.

The Japanese Lilies are so hardy, as well as beautiful, that they should become as common as the Turk's Cap and Tiger Lilies. They are now all moderately cheap, and if one only has a bulb or two to start with, the stock may readily be increased. If left to themselves, the bulbs become large clumps by natural subdivision, but this is a slow way of multiplying them. If a lily be taken up in autumn, after the leaves have withered, there will be found upon the stem, just above the old bulb, a mass of small bulbs intermingled with roots. A dozen, and even more, are frequently found. The little bulbs may be removed and planted out separately, or the stem to which they are attached may be cut off just above the old bulb, and set out with the cluster of bulbs and roots attached. They should be covered the first winter with a few inches of litter. The next season they will make strong bulbs.

Another method of propagation is from the scales, of which the lily is mostly made up. These scales are attached to a solid portion at the base of the bulb, and they are broken off close to this, it being important to get the very base of the scale. The outer scales of a bulb may be removed without injury to it. Indeed, the majority of those offered for sale by florists have first been deprived of their outer

scales, which makes the bulb look better, and at the same time gives them material for propagation. The scales are set out in an upright position in boxes of sandy compost, pressing them down into it until the point is about level with the surface. The boxes are to be placed in a room where they will be at about the temperature of 50 or 60 degrees, and kept just moist enough to prevent shrivelling. In about two months a small bulb, sometimes two, will be found at the base of each scale. In spring the boxes are plunged in the open ground, and the bulbs allowed to grow all summer; in the following autumn cover them with litter, and the next spring if too thick, they are to be planted out separately.—*Exchange.*

Pears in 1870.

P. Barry, in his Notes of Pears for the *Horticultural Annual*, states: "The crop of *Beurre d'Anjou* was lighter than I have ever seen it, but what there was of it was very fine. *Josephine de Malines* were extraordinary in size, and generally marked with red in the sun as they have very rarely been before. Clapp's Favorite was very fine, showing it to be as reliable as the Bartlett. Prices were well maintained. Summer varieties were sold at Rochester at from $2 to $3 per bushel; autumn varieties at $4. Some that we sent to Philadelphia were sold at $8 to $10 the half barrel, of nearly one and a half bushels. In one case eighty pears—Duchesse d'Angouleme—filled the half barrel, making 12½ cents a-piece."

Rhododendrons and American Plants.

Mr. Edward S. Rand, Jr., has issued the above new book, from the press of Little, Brown & Co., Boston. It has been a favorite subject with him, and as yet but little referred to in the horticultural literature of the day. His collection of Rhododendrons is believed to be the largest in the entire country, and increases yearly. He says: "These plants are attractive at all seasons; in flower they are magnificent; in foliage they excel any evergreens. They can be grown as easily as lilacs, and bloom quite as freely."

Considerable space is devoted to Azaleas and Kalmias. The list of varieties is very full and complete, and we are glad to find that he has compiled several hardy lists of best varieties most suitable for the general planter. The publishers have done justice to this excellent work by excellent type and paper. Price, $1.75.

California Raisins.

A correspondent of the *San Francisco Pioneer*, writing from Southern California, says: "Mr. Smith, of Ancheim, six miles from this colony, showed us raisins of his own curing that were equal to any that are imported; and he informed us that he had simply cut them off and thrown them on the ground to dry. He plants about 1,000 vines to the acre, and says, when in good bearing condition, say five years old, they produce about twenty pounds of raisins to the vine." Orange trees nine to ten years old yield 1,000 oranges per tree. English Walnut trees, ten years old, yield $10 per tree each year; twenty-six are planted to each acre.

Mr. Wilder's Lecture on California.

The citizens of Philadelphia had an excellent opportunity, last April, to listen to Mr. Wilder's lecture on California. It was exceedingly interesting, and the audience were well entertained. A reception was given after it, as also an entertainment by the officers of the Pennsylvania Horticultural Society.

Wire Fences and Trellises.

Mr. Philip S. Justice, of Philadelphia, has invented a very cheap and convenient wire fence, for either the front of pleasure grounds, or as division lines, or as trellises for vines. The cost is so cheap, and the convenience so great, that we shall not wonder if they meet with general favor from the public.

Newspaper Changes and News.

The *Rock River Farmer* is a new agricultural monthly, published at Dixon, Ill. Price, $1 per annum.

Sloan's Architectural Review is a failure, having suspended last November.

The *Western Gardener*, through a fire and the burning of its office, has lost its subscription books, causing considerable trouble in mailing numbers to its subscribers. The publishers request all who notice this fact to write and send their names at once to them for correct entry upon a new book.

Our Home Journal, a new Illustrated Agricultural and Home Weekly, from New Orleans, $3 per annum.

Tennessee Agriculturist, McMinnville, Tenn., weekly, $2.50 per annum.

Attractive Strawberries for Market.

I would say that fruit that has a high color—glossy and bright, always sells well, even if but of ordinary size; hence, it behooves every grower to give his fruit this peculiar lustre or gloss. This can only be done by heavy mulching with coarse litter-like straw or hay. This keeps the surface moist, and prevents the sun's reflection from burning the fruit, and giving it that dull, dead appearance that too much fruit on the market stands have, and which so operates against their ready sale at paying prices. And, too, vines that are well mulched are not so apt to produce fruit that is knotty and hard. Here, then, is one important requirement to grow first-class fruit. I could not but note the appearance of fruit on the stands in New York last spring, and could tell at a glance, from that peculiar glossy appearance, which came from plantations that were mulched properly; and those who purchase fruit soon learn this; hence the quick sale of certain brands.—*Small Fruit Recorder.*

What Apples to Grow for Market.

Dr. Hull, of the *Prairie Farmer*, visited the Chicago markets last fall, to ascertain the relative value of the different varieties of apples. Here is the results of his tour:

"One house visited by us in February last, which purchased and stored upwards of twenty thousand barrels of apples the past fall, for the winter trade, were then putting them on the market. Ben Davis, and other handsome, but inferior apples, were selling at $3.75 to $4 per barrel. Baldwins, $4 to $5.50. R. I. Greenings, $6, while a variety known as Pomme Grise, a small gray apple, not better looking than medium sized Roxbury Russets, but possessing qualities superior to any variety known to us, were selling to regular customers at $8 the barrel. And, we are assured, six times as many R. I. Greenings, at the price named ($6) could be sold as of any other, because of its well-known, good eating and cooking qualities. In other words, people had come to know it, and would rather pay these extra rates than take the risk of getting the beautiful, but greatly inferior fruits."

Big Asparagus.

Shirley Hibberd, in the London *Gardener's Magazine*, thinks that all the *Giant* and *Colossal* character in asparagus comes simply from "difference in culture, rather than difference in seed." Wide planting will undoubtedly give large shoots and more of them from each hill; but how is it that when two beds are put out side by side, one will be large and fit for cutting a year before the other? This is the way Conover's Colossal acts here, near New York.

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